



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/522,315	09/22/2005	Zamir Tribelsky	P-7664-US	9214

49443 7590 01/24/2008  
PEARL COHEN ZEDEK LATZER, LLP  
1500 BROADWAY 12TH FLOOR  
NEW YORK, NY 10036

EXAMINER
----------

YOO, REGINA M

ART UNIT	PAPER NUMBER
----------	--------------

1797

MAIL DATE	DELIVERY MODE
-----------	---------------

01/24/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	Application No. 10/522,315	Applicant(s) TRIBELSKY, ZAMIR	
	Examiner Regina Yoo	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 13 November 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,4 and 16-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 4 and 16-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**FINAL ACTION**

***Response to Amendment***

The amendment filed on 11/13/2007 has been received and claims 1, 4 and 16-18 are pending.

***Claim Rejections - 35 USC § 102***

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1, 4 and 16-18 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Schneider (3503804).

As to Claim 1, Schneider ('804) discloses a method for photochemical treatment, the method comprising:

providing a stream of liquid having a predetermined flow rate (see entire document, particularly Col. 2, lines 23-24, Col. 3, lines 65-67);

directing UV-radiation (see Col. 2, lines 31-32) within said stream of liquid to disinfect the liquid such that the liquid serves as a flowing liquid wave guide carrying the UV-radiation making use of total internal reflection of the UV radiation (see entire document, particularly Col. 2, lines 22-28, 61-67 and Col. 3, lines 19-27 wherein the use of UV radiation within a stream of liquid inherently disinfects the liquid that is used to carry the UV radiation and thus, the stream of liquid will be a stream of liquid to be disinfected through its interaction with the UV radiation).

In the event that the Schneider ('804) does not sufficiently teach that the stream of liquid provided is to be disinfected, it was well known in the art at the time of invention to provide a stream of liquid to be disinfected through a pipe with an outlet and to disinfect the stream at its outlet with UV radiation and it would have been obvious to one of ordinary skill in this art at the time of invention to provide the stream of liquid utilized as a liquid to be disinfected in the method of Schneider in order to sterilize the stream of water so as to avoid contamination of the surface of object treated by the water.

As to Claim 4, Schneider ('804) discloses a method for photochemical treatment wherein said UV-radiation is generated by a laser source ((see entire document, particularly Col. 2, lines 59-60 and Col. 3, lines 69-71).

As to Claim 16, Schneider ('804) discloses a method for photochemical treatment wherein said liquid having a refractive index greater than a refractive index of the surrounding (see entire document, particularly Col. 2, lines 61-67 and Col. 3, lines 19-23 wherein the occurrence of total internal reflection within the liquid of the radiation indicates that the liquid possesses a higher refractive index than the surrounding).

As to Claim 17, Schneider ('804) discloses a method for photochemical treatment wherein the UV radiation is utilized, but does not appear to specifically teach that UV radiation is UVA-, UVB- or UVC-radiation. However, UV radiation inherently consists of UV-A, UV-B or UVC-radiation, and thus is deemed to meet this limitation.

As to Claim 18, Schneider ('804) discloses a method for photochemical treatment wherein the liquid being water (see entire document, particularly Col. 3, line 24 and Col. 4, line 26).

5. Claims 1, 4 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider (3503804) in view of Norton (4676896) or Baca (20020079271).

As to Claim 1, Schneider ('804) discloses a method for photochemical treatment, the method comprising:

providing a stream of liquid having a predetermined flow rate (see entire document, particularly Col. 2, lines 23-24, Col. 3, lines 65-67);

directing UV-radiation (see Col. 2, lines 31-32) within said stream of liquid to disinfect the liquid such that the liquid serves as a flowing liquid wave guide carrying the UV-radiation making use of total internal reflection of the UV radiation (see entire document, particularly Col. 2, lines 22-28, 61-67 and Col. 3, lines 19-27 wherein the use of UV radiation within a stream of liquid inherently disinfects the liquid that is used to carry the UV radiation).

Schneider ('804) does not appear to specifically teach that the stream of liquid provided is to be disinfected.

However, it was well known in the art at the time of invention to provide a stream of liquid to be disinfected through a pipe with an outlet and to disinfect the stream at its outlet with UV radiation. Norton ('896) exemplifies a method of water purification through photochemical treatment (see entire document, particularly Abstract), comprising:

providing to a stream of liquid to be disinfected having a predetermined flow rate (see Col. 2 lines 3-4); and

directing within said stream of liquid to be disinfected UV radiation to disinfect the liquid (see entire document, particularly Col. 1 lines 47-55 and Col. 2 lines 5-20),

in order to sterilize the water to eliminate bacterial contamination of the water for end use.

Baca ('271) also exemplifies a method of water purification (see entire document, particularly Abstract and Figures 2-3), comprising:

providing a stream of liquid to be disinfected having a predetermined flow rate (see p. 4 [0039]); and

directing, within said stream of liquid to be disinfected, UV-radiation to disinfect the liquid (see entire document, particularly p. 2 [0027] and p. 4 [0040]-[0042]),

in order to effectively kill unwanted microorganisms within the water so that the water when used to treat a surface does not contaminate the surface (see p. 4 [0040]).

It would have been obvious to one of ordinary skill in this art at the time of invention to provide the stream of liquid utilized as a liquid to be disinfected in the method of Schneider in order to sterilize the stream of water so as to avoid contamination of the surface of object treated by the water as exemplified by Norton or Baca.

As to Claim 4, Schneider ('804) discloses a method for photochemical treatment wherein said UV-radiation is generated by a laser source (see entire document, particularly Col. 2, lines 59-60 and Col. 3, lines 69-71).

Baca ('271) also discloses a method for photochemical treatment wherein said UV-radiation is generated by a laser source (see entire document, particularly Abstract and p. 4 [0041]).

As to Claim 16, Schneider ('804) discloses a method for photochemical treatment wherein said liquid having a refractive index greater than a refractive index of the surrounding (see entire document, particularly Col. 2, lines 61-67 and Col. 3, lines 19-23

wherein the occurrence of total internal reflection within the liquid of the radiation indicates that the liquid possesses a higher refractive index than the surrounding).

As to Claim 17, while Schneider ('804) and Norton ('896) disclose a method for photochemical treatment wherein the UV radiation is utilized, but neither Schneider nor Norton appears to specifically teach that UV radiation is UVA-, UVB- or UVC-radiation. However, UV radiation inherently consists of UV-A, UV-B or UVC-radiation, and thus is deemed to meet this limitation.

Baca ('271) also discloses a method for photochemical treatment wherein the UV radiation is utilized is UVA-, UVB- or UVC-radiation (see entire document, particularly p. 2 [0027]).

As to Claim 18, Schneider ('804) discloses a method for photochemical treatment wherein the liquid being water (see entire document, particularly Col. 3, line 24 and Col. 4, line 26).

Norton ('896) also discloses that the liquid is water (see Abstract).

Baca ('271) also discloses that the liquid is water (see Abstract).

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1, 4, 16-18 have been considered but are moot in view of the new ground(s) of rejection.



7. Applicant's arguments filed 11/13/2007 have been fully considered but they are not persuasive.

Specifically, in response to applicant's argument that the Schneider is directed to "a method and apparatus [for cleaning a surface where] the jet of liquid is used only as a means for cleaning the surface [and]... as a medium for energy transfer, that "the liquid does not offer any appreciable resistance to the radiation energy at least in the region of the jet length"', Schneider does teach that the radiation is reflected at the inner wall of the liquid jet due to so-called total reflection (see Col. 3 lines 19-25). Moreover, the claims as presented do not limit the method from utilizing the flowing stream of liquid which is disinfected for cleaning purposes and thus, the argument is not commensurate with the scope of the claims.

### ***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any


extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Yoo whose telephone number is 571-272-6690. The examiner can normally be reached on Monday-Friday, 10:00 am - 7:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on 571-272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RY



GLADYS JP CORCORAN  
SUPERVISORY PATENT EXAMINER